

# ABSTRACT OF THE DISCLOSURE

A semiconductor manufacturing apparatus for executing an exposure process upon filling a chamber, an illuminating optics unit and a projection optics unit with an inert gas is provided with a supply unit that supplies clean, dry air for raising the concentration of oxygen in a maintenance area, and with a sensor for sensing oxygen concentration or ozone concentration in the maintenance area. When maintenance is carried out, the supply unit is actuated to raise the oxygen concentration in the maintenance area, thereby assuring the safety of workers. A maintenance cover is provided with a door switch for sensing that the cover has been opened. Actuation of the supply unit is started in accordance with the state sensed by the door switch. Alternatively, the supply unit is actuated on the basis of an input ordering the start of a maintenance operation. If the environment in the maintenance area has not reached a level that safe for the human body, a warning lamp is lit to so alert workers and the maintenance cover is kept locked.